

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the **PATENT APPLICATION** of:

Stone et al.

**Application No.:** 10/566,938

**Confirmation No.** 1160

**Filed:** February 2, 2006

**For:** TRIPLE LAYER INDUSTRIAL FABRIC  
FOR THROUGH-AIR DRYING PROCESS

**Group:** 1794

**Examiner:** Andrew T. Piziali

Our File: AJF-2.204.0US

**DECLARATION OF RICHARD STONE UNDER 37 CFR §1.132**

I, Richard Stone, hereby declare and state as follows:

1. I am a joint inventor of the above-referenced patent application.
2. I am currently employed by AstenJohnson, Inc., the assignee of the present application as a Senior Technologist. I have 28 years experience in research and development in designing and the construction of industrial fabrics, in particular for use on papermaking machines. I am a mechanical technologist with certification from the Montreal Institute of Technology. I have been intimately involved in the design and manufacture of papermaking fabrics for 38 years and am named inventor on 7 United States granted patents which have issued since 2001.
3. Based on my experience and education, I would be considered a person of at least ordinary skill in the art in the art of industrial fabrics, and in particular to papermaking fabrics.
4. I have reviewed the Office Action dated May 20, 2009 which was issued in this patent application. As I understand it, the claims have been rejected based on the assertion in the Office Action that the claims include subject matter not sufficiently described in the specification so that a person skilled in the relevant art would understand that the inventors had possession of the claimed invention at the time the application was filed. Specifically, the Office Action asserts that there is no disclosure

of the members of each weft pair being in adjacent contact at each exchange point, and that this is not shown in the drawings.

5. This rejection is incorrect, as a person of ordinary skill in the art would understand from the original specification and drawings that the members of each weft pair must, by definition, be in adjacent contact at each exchange point based on the original disclosure provided.

6. Paragraph [0019] of the US2006/0211320 states:

(iii) each pair of intrinsic weft binder yarns forms an unbroken weft path in both the PS layer and the MS layer, whereby when either the first or second member passes from the PS layer to the MS layer, the other member of the pair passes from the MS layer to the PS layer at an exchange point located between at least one common pair of warp yarns. (emphasis added).

7. Paragraph [0037] of the US2006/0211320 states:

In the first embodiment, as can be seen for example in relation to first and second members 30 and 31 in FIG. 2A, the two members of each pair of weft yarns 100 follow an identical path, the path of the second member 31 being displaced by one-half of a pattern repeat from the first member 30. In this embodiment, the first member 30 in a first portion of the repeat pattern is exposed over two PS warp yarns 1 and 5, and then switches to the MS layer, passing under PS warp yarn 7 and over MS warp yarn 8, whence it follows a second portion of the repeat pattern, being exposed over two MS warp yarns 10 and 14. At the same time, the second member 31 in a first portion of the repeat pattern is exposed over two MS warp yarns 2 and 6, and then switches to the PS layer, also passing under PS warp yarn 7 and over MS warp yarn 8, whence it follows a second portion of the repeat pattern, being exposed over two PS warp yarns 9 and 13. A second

exchange point 90 occurs between PS warp yarn 15 and MS warp yarn 16. Thus it can be seen that the two members 30 and 31 exchange positions at an exchange point 90 between the vertically stacked pair of warp yarns 7 and 8. Similarly, with reference to FIGS. 1B, 1C and 1D, each pair of weft yarns follows the same path, displaced by an appropriate number of PS and MS warp yarns, 110 and 120. It can be seen that for this embodiment,  $N1=N2=M1=M2=2$ .

8. Paragraphs [0040] and [0041] also reference that the members of each weft pair travel an "identical path."

9. Paragraph [0037] particularly states that "the two members of each pair of weft yarns 100 follow an identical path, the path of the second member 31 being displaced by one-half of a pattern repeat from the first member 30." A person of ordinary skill in the art would recognize that, in order for this to occur, the weft yarn pair members must be woven so that the path of each complements the other. For example, weft yarn 30 in Fig. 2A follows an over-1/under-1 path from left to right (over warp 1, under 3, over 5) which weft yarn 31 continues following the exchange point 90.

This exchange occurs between a common pair of stacked warp yarns 7 & 8. The next adjacent weft pair 32, 33 shown in Fig. 2B, follows a similar but displaced pattern which causes weft yarn 32 to follow an under-1/over-1 pattern from left to right (under warp 1, over 3, under 5) which pair member 33 continues. A person of ordinary skill in the art would recognize that the only way this can be accomplished would be if the first weft yarn pair was woven according to a first shedding arrangement in the loom while the second yarn pair utilized a similar, but second, shedding arrangement.

10. When this is done, weft yarns 30 and 31 will of necessity be in contact at their exchange points 90 with one another (due to the first shedding arrangement), while the next weft yarn pair members 32, 33 will be separated from the first pair 30, 31 due to their second, differing shedding arrangement. The next weft yarn pair members 32, 33 will also be in contact with each other at their exchange point 90, but

will be separated from the first weft yarn pair 30, 31. Thus, the contact made between the weft yarn pair members at their exchange points, and the separation of the adjacent yarn pairs as is clearly visible in Figure 1, is the result of the differing shedding arrangement applied to each of these weft yarn pairs. This occurrence is well known from the prior art (e.g. Seabrook et al. US 5,826,627) and would be understood by others of similar skill.


11. A person of ordinary skill in the art would also understand that an “identical path” of the members of the weft yarn pairs refers to the two members of a weft yarn pair traveling in a common weft plane across the fabric body, and that the formation of “an unbroken weft path in both the PS and the MS layers” refers to the specific weave along each weft path being complete so that it appears uninterrupted on both the paper side and the machine side of the fabric. This is shown in Fig. 1, where the foremost weft pair forms a plain weave on both the PS and MS of the fabric, without missing or skipping any part of the weft weave in either the PS or MS for this weft path. Further, the recitation that the two members follow an “identical path” makes it clear that the weft pair members are in the same weft plane. Otherwise, a staggered arrangement, such as in U.S. 4,921,750 would result, which shows separate “broken” weft paths on the PS and MS. By definition, because the members of each weft pair are in the same weft plane (i.e., the “identical path”), there is contact at each of the exchange points between the members of each weft pair as they must push outward and around one another at the exchange points in order and then move back in to alignment to form the unbroken weft path on the PS and MS after the exchange.

12. Fig.1 is a photograph of an actual sample of the fabric according to the invention, where contact is present in the actual sample that was photographed and is shown at each of the exchange points. The identical paths of the two members of the foremost weft pair are also clearly shown.

13. The original disclosure therefore clearly indicates to a person of ordinary skill in the art that the members of each weft pair must, by definition, be in adjacent contact at each exchange point.

I have been warned that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. § 1001) and may jeopardize the validity of the application or any patent issuing thereon. I declare under penalty of perjury under the law of the United States of America that the foregoing is true and correct.

Executed this 12<sup>th</sup> day of August 2009 at Kanata, Ontario.

  
Richard Stone